

Serial No. 10/697,626

Filing Date: October 30, 2003

REMARKS

Claims 1-8, 10-18, 21-26, 28-29, 31-32 and 35-40 are pending in the present application. Independent Claims 1, 8, 10-15, 22, 24-26, 28, 31, and 32 have been amended, and Claims 9, 19, 20, 27, 30, 33 and 34 have been canceled. In addition, Claims 35-40 have been added to claim subject matter included in the application. No new matter has been added. Reconsideration of the pending Claims in view of the following remarks is respectfully requested.

Claim Rejections pursuant to 35 U.S.C. §103(a)

Claims 1, 15 and 26 stand rejected pursuant to 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,598,480 to Kim (hereinafter "Kim") in view of U.S. Patent No. 4,670,709 to Iredale (hereinafter "Iredale"). Claims 2, 3, 16 and 17 stand rejected pursuant to 35 U.S.C. §103(a) as being unpatentable over Kim in view of Iredale and further in view of U.S. Patent No. 4,504,704 to Oyaba (hereinafter "Oyaba"). Claims 4, 5 and 18 stand rejected pursuant to 35 U.S.C. §103(a) as being unpatentable over Kim in view of Iredale and further in view of U.S. Patent No. 4,751,738 to Widrow et al. (hereinafter "Widrow"). Claims 6, 7 and 29 stand rejected pursuant to 35 U.S.C. §103(a) as being unpatentable over Kim in view of Iredale and further in view of U.S. Patent No. 5,533,135 to Gary (hereinafter "Gary"). Claims 9, 20, 30, 33, and 34 stand rejected pursuant to 35 U.S.C. §103(a) as being unpatentable over Kim in view of Iredale and further in view of U.S. Patent No. 6,661,290 to Suguira (hereinafter "Suguira"). Claims 10-13 stand rejected pursuant to 35 U.S.C. §103(a) as being unpatentable over Kim in view of Iredale and further in view of Gary and even further in view of U.S. Patent No. 6,381,334 to Alexander (hereinafter "Alexander '334"). Claims 14 and 25 stand rejected pursuant to 35 U.S.C. §103(a) as being unpatentable over Kim in view of Iredale and further in view of U.S. Patent Publication No. 2004/0101153 to Grudin (hereinafter "Grudin"). Claims 21-24 stand rejected pursuant to 35 U.S.C. §103(a) as being unpatentable over Kim in view of Iredale and further in view of Alexander '334. Claims 8, 19, and 27 stand rejected pursuant to 35 U.S.C. §103(a) as being unpatentable over Kim in view of Iredale and further in view of U.S. Patent No. 5,097,223 to Alexander (hereinafter "Alexander '223"). Claims 28 and 32 stand rejected pursuant to 35 U.S.C. §103(a) as being unpatentable over Kim in view of Iredale and further in view of Alexander '334 and even further in view of Alexander '223. Claims 31 stands rejected pursuant to 35 U.S.C. §103(a) as being unpatentable over Kim in view of Iredale and further in view of Alexander '223 and even further in view of Grudin. Applicant

Serial No. 10/697,626

Filing Date: October 30, 2003

respectfully traverses these rejections for at least the following reasons because the cited prior art fails to teach the invention described in the amended claims.

Applicant also respectfully traverses the repeated assertion in the office action mailed May 20, 2005 that "impedance matching is well known in the art." As was discussed with the Examiner via telephone on September 13, 2005 and addressed in detail with reference to the evidence supplied as Attachments A, B, C and D of the office action response filed on November 19, 2004, it is not well known in the art to impedance match an audio amplifier to a load. In fact, just the opposite is the case. Applicant has amended Independent Claims 1, 10-14, 15, 22, 24, and 25 to describe an audio power amplifier, independent Claim 26 to describe audio amplification means and independent Claims 31 and 32 to describe a current-feedback audio amplifier in this regard.

For the reasons discussed with the Examiner and further evidenced in Attachments A, B, C and D, of the office action response filed on November 19, 2004, in the field of audio amplifiers it is desirable to have an output impedance as close to infinity as possible for current amplifiers, and as close to zero as possible for voltage amplifiers. Thus, the range of output impedance that is not as close as possible to infinity or zero, such as between about 25 percent and about 400 percent is considered a "no man's land" by those skilled in the art.

In the office action mailed May 20, 2005, Iredale is cited as teaching impedance matching. However, Iredale is directed to a continuity tester that includes a speaker designed to emit a 1 KHz test tone. (Col. 2 lines 13-17) Clearly, Iredale was not at all concerned about ranges of frequency response as discussed with reference to Figs. 5-10 of Applicant's specification, nor the impact of changes in driver impedance on the range of frequency response. Although Iredale briefly mentions that a low output impedance of a power amplifier "approximately" matches an input impedance of a speaker (Col. 2 lines 29-32), Iredale is clearly not concerned with the problems related to a range of frequency response around a crossover frequency as discussed in Applicant's specification. Further, Iredale teaches only a single frequency. Thus, Applicant respectfully asserts that Iredale is non-analogous art. In addition, the continuity tester of Iredale is not an audio power amplifier and has little relation to audio power amplifiers, other than to possibly test the continuity of cables coupled with an audio power amplifier. Accordingly, there is a lack of a suggestion to combine the continuity tester of Iredale with an audio power amplifier.

Serial No. 10/697,626

Filing Date: October 30, 2003

Claims 1-7 and 9-14

Amended Claim 1 provides an audio power amplifier having an input and an output. The audio power amplifier includes a current-feedback amplifier configured to create a desired impedance at the output that is between about 25 percent and about 400 percent of the input impedance of the driver circuit. None of the cited prior art either alone or in combination teaches, suggests or describes an audio power amplifier that includes a current-feedback amplifier configured to create a desired impedance at an output of the audio power amplifier that is between about 25 percent and about 400 percent of an input impedance of a driver circuit as described in Claim 1.

Accordingly, for at least the foregoing reasons, Applicant respectfully traverses the 35 U.S.C. §103(a) rejection of amended Claim 1 since all of the limitations described are not taught, suggested or disclosed by the cited prior art, either alone or in combination and a *prima facie* case of obviousness can no longer be maintained. In addition, Claims 2-7 and 9-14 depend from independent Claim 1 and therefore a *prima facie* case of obviousness can no longer be maintained for these claims for at least the same reasons. Thus, Applicant respectfully requests withdrawal of the 35 U.S.C. §103(a) rejection of Claims 1-7 and 9-14.

Claims 15-18 and 21-25

Amended Claim 15 describes the step of setting an output impedance of an audio power amplifier with a current feedback circuit included in the audio power amplifier. Claim 15 also describes that the output impedance is set to be between about 25 percent and about 400 percent of the arrangement cold impedance. None of the cited prior art teaches, suggests or discloses setting an output impedance of an audio power amplifier with a current feedback circuit. In addition, none of the cited prior art teaches or suggests that the output impedance is set to be between about 25 percent and about 400 percent of an arrangement cold impedance.

Thus, for at least the foregoing reasons, Applicant respectfully traverses the 35 U.S.C. §103(a) rejection of amended Claim 15 since all of the limitations described are not taught, suggested, or disclosed by the cited prior art, either alone or in combination and a *prima facie* case of obviousness can no longer be maintained. In addition, Claims 16-18 and 21-25 depend from independent Claim 15 and therefore a *prima facie* case of obviousness can no longer be maintained for these claims for at least the same reasons. Thus, Applicant respectfully requests withdrawal of the 35 U.S.C. §103(a) rejection of Claims 15-18 and 21-25.

Serial No. 10/697,626

Filing Date: October 30, 2003

Claims 26 and 28-29

Amended Claim 26 describes an audio amplification means for receiving an incoming electrical signal at an input and providing an amplified signal that is a function of the incoming electrical signal at an output that has an output impedance. Claim 26 also provides that the audio amplification means comprises a current feedback amplifier configured to set the output impedance of the amplification means to be between about 25 percent and about 400 percent of a first cold impedance.

None of the cited prior art teaches or suggests a current feedback amplifier configured to set an output impedance of an amplification means as described in Claim 26. In addition, none of the cited prior art teaches or suggests a current feedback amplifier that is configured to set the output impedance of the amplification means to be between about 25 percent and about 400 percent of a first cold impedance as further described in Claim 26.

For at least the foregoing reasons, Applicant respectfully traverses the 35 U.S.C. §103(a) rejection of amended Claim 26 since all of the limitations that are now described are not taught, suggested, or disclosed by the cited prior art, either alone or in combination and a *prima facie* case of obviousness can no longer be maintained. In addition, Claims 28-29 depend from independent Claim 26 and therefore a *prima facie* case of obviousness can no longer be maintained for these claims for at least the same reasons. Thus, Applicant respectfully requests withdrawal of the 35 U.S.C. §103(a) rejection of Claims 26 and 28-29.

Claim 31

Claim 31 has been amended to provide a current feedback audio amplifier comprising a current monitor and a feedback circuit. The current monitor is operable to sense a current at an output of the current feedback audio amplifier, and the feedback circuit is operable as a function of the sensed current to generate a feedback signal to create an output impedance of the current feedback audio amplifier that is substantially matched to the cold input impedance of the driver circuit.

None of the cited prior art teaches, suggests, or discloses a current monitor operable to sense a current at an output of a current feedback audio amplifier as described in Claim 31. In addition, none of the cited prior art teaches or suggests a feedback circuit that is operable as a function of the sensed current to generate a feedback signal to create an output impedance of the current feedback

Serial No. 10/697,626

Filing Date: October 30, 2003

audio amplifier that is substantially matched to the cold input impedance of a driver circuit as further described in Claim 31.

Applicant respectfully traverses the 35 U.S.C. §103(a) rejection of amended Claim 31 since all of the limitations now described are not taught, suggested or disclosed by the cited prior art, either alone or in combination and a *prima facie* case of obviousness can no longer be maintained. Thus, Applicant respectfully requests withdrawal of the 35 U.S.C. §103(a) rejection of Claim 31.

Claim 32

Amended Claim 32 includes the step of configuring an output impedance of a current-feedback audio amplifier with a feedback signal, to be within the operational range of the input impedance of a driver circuit. Claim 32 also describes that the feedback signal is generated based on an output current of the current-feedback audio amplifier. None of the cited prior art either alone or in combination teaches, suggests, or discloses configuring an output impedance of a current-feedback audio amplifier with a feedback signal as described in Claim 32. In addition, configuring the output impedance to be within an operational range of an input impedance of the driver circuit is not taught, suggested, or disclosed by the cited prior art, either alone or in combination.

Accordingly, Applicant respectfully traverses the 35 U.S.C. §103(a) rejection of amended Claim 32 since all of the limitations described are not taught, suggested or disclosed by the cited prior art, either alone or in combination and a *prima facie* case of obviousness can no longer be maintained. Thus, Applicant respectfully requests withdrawal of the 35 U.S.C. §103(a) rejection of Claim 32.

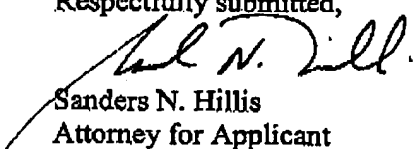
With regard to Claims 8 and 35-40, none of the cited prior art either alone or in combination teach, suggest or disclose the claimed features, and therefore Claims 8 and 35-40 are also patentable over the prior art of record. With this amendment and response, the present pending claims of this application are allowable and Applicant respectfully requests the Examiner to issue a Notice of

Serial No. 10/697,626

Filing Date: October 30, 2003

Allowance for this application. In the event a telephone conversation would expedite the prosecution/allowance of this application, the Examiner is invited to contact the undersigned at (317) 636-0886.

Respectfully submitted,


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